

The ABC's of Missouri's Future Workforce

Part 1: Missouri's Colleges and Universities



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Key Findings

- The great majority of Missouri's undergraduates attend post-secondary institutions within the economic region where they graduated from high school, or in adjacent economic regions.
- In the fall of 2000, 86% of Missouri's undergraduates attended public post-secondary institutions (41% attended 2-year and 45% attended 4-year post-secondary institutions).
- Between 1996 – 2001, the largest percentages of Associates and Bachelors degrees (entry-level degrees) awarded in Missouri were awarded in business, health and social science.
- Between 1996 – 2001, the largest percentages of Masters and Doctoral degrees (advanced degrees) awarded in Missouri were awarded in business, education, law and medicine.

Key Policy Implications

- Kindergarten through Baccalaureate (K-16) Initiatives, seeking to impact specific regions in Missouri, must concentrate their efforts on *regional* elementary, middle, secondary and post-secondary institutions in order to have the desired effect on students of those regions.
- Missouri's businesses should be encouraged to consult their regional post-secondary institutions on the training of current and prospective employees. Economies of scale in training and improved expansion planning may be realized by Missouri businesses.
- Missouri is well prepared across a broad range of expertise to support growth in the life science industries.
- Missouri's production of engineers, mathematicians and computer scientists must be increased if it is to meet the needs of information technology and advanced manufacturing.

The ABC's of Missouri's Future Workforce

Part 1: Missouri's Colleges and Universities

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Analysis and reporting by Timothy O. Smith.

I. Overview and Methods

A chief concern in the location decisions of businesses is the availability of a qualified labor force from which to draw their employees. Missouri's readiness to offer workers with the skills needed to attract high paying, high technology industries is the subject of this study. Specifically, the types and levels of expertise being produced by Missouri's educational infrastructure is compared with the types and levels of expertise needed to attract the industries currently being targeted by the state – Information Technology, Advanced Manufacturing, and Life Sciences.

The Missouri Economic Research and Information Center (MERIC) analyzed data provided by the Coordinating Board for Higher Education (CBHE) in order to better understand Missouri's readiness to supply the targeted industries with well-prepared, highly skilled employees at all levels of employment. Missouri's colleges and universities were also explored to reveal regional differences in the subjects represented by undergraduate and graduate degrees awarded to each region's residents. In this analysis, simple frequency tables were used to determine where Missouri's undergraduates were attending school based upon their geographic origin. Only those institutions which grant Associates, Bachelor's, Master's, or Doctoral degrees were included in this analysis. The level and academic subject of degrees granted by undergraduate and graduate institutions are analyzed to depict the differences in subject areas of those degrees across different economic regions. The economic regions used for geographic analysis in this study are presented in Map 1.1. Maps and tables specifying where undergraduate students attended in the Fall of 2000 by economic region are also presented.

Map 1.1

Missouri Economic Regions



II. Missouri's Colleges and Universities

Students usually attend undergraduate institutions near their homes. The highlighted areas of Table 1 illustrate that the great majority of Missouri's undergraduates attend post-secondary institutions within their economic region (blue highlights), or in an adjacent region (yellow highlights). In those regions which do not contain a public four-year institution (Bootheel, North Central and South Central) or a public two-year institution (Lake Ozark – Rolla), students tend to attend an institution in an adjacent region. It is suggested that the specialized nature of the curriculum at the University of Missouri – Rolla is a large part of the reason why many of the undergraduates from that region attend institutions in the Springfield or Central regions. This finding suggests that proximity plays a primary role in where undergraduates attend school. One implication of this for employers is that the post-secondary institutions closest to one's business are the ones most likely to provide post-secondary education for the children of current employees. If it is also true that people tend to find work close to their parents' homes or close to their post-secondary institutions, then the local post-secondary institutions are also the most likely source of future employees. Because their pool of potential students is in this way very influenced by the success of local employers, local post-secondary institutions will also be those most likely to be responsive to implementing tailored programs for employee training. The numbers of students who attended post-secondary institutions are mapped by region of student origin in Section III: Regional Details.

Table 1: Fall 2000 Undergraduate Enrollment by Regions of Student Origin and Post-Secondary Institution

| Region of Origin Region of College | Bootheel | Central | Kansas City | St. Louis City | St. Louis Metro | Springfield | Northwest | North Central | Northeast | West Central | Lake Ozark – Rolla | Cape Girardeau | Southwest | South Central |
|---------------------------------------|----------|---------|-------------|----------------|-----------------|-------------|-----------|---------------|-----------|--------------|--------------------|----------------|-----------|---------------|
| Bootheel | 44.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 1.4% | 0.0% | 0.4% |
| Central | 7.3% | 65.9% | 7.4% | 3.7% | 9.5% | 4.2% | 8.9% | 18.9% | 40.5% | 7.7% | 19.2% | 7.4% | 3.6% | 5.1% |
| Kansas City | 0.6% | 1.3% | 67.7% | 0.4% | 0.8% | 0.8% | 4.7% | 2.8% | 1.1% | 5.3% | 0.7% | 0.4% | 3.2% | 0.5% |
| St. Louis City | 0.3% | 0.5% | 0.2% | 45.8% | 9.3% | 0.1% | 0.1% | 0.2% | 0.3% | 0.3% | 0.6% | 1.0% | 0.1% | 0.1% |
| St. Louis Metro | 1.7% | 4.2% | 0.6% | 38.1% | 67.2% | 0.5% | 0.3% | 1.0% | 4.1% | 0.6% | 14.2% | 11.3% | 0.4% | 0.8% |
| Springfield | 6.9% | 6.4% | 4.2% | 4.1% | 3.9% | 89.4% | 3.6% | 4.9% | 5.4% | 8.0% | 40.9% | 4.4% | 18.8% | 42.1% |
| Northwest | 0.1% | 1.8% | 7.1% | 0.4% | 0.4% | 0.2% | 71.1% | 15.3% | 6.4% | 1.7% | 1.0% | 0.2% | 0.4% | 0.3% |
| North Central | 0.0% | 0.1% | 0.1% | 0.0% | 0.0% | 0.0% | 5.8% | 37.8% | 0.7% | 0.3% | 0.0% | 0.0% | 0.0% | 0.0% |
| Northeast | 0.9% | 3.9% | 1.9% | 5.3% | 2.7% | 0.8% | 1.7% | 4.7% | 34.2% | 1.0% | 2.0% | 1.2% | 0.5% | 1.3% |
| West Central | 0.8% | 13.5% | 9.2% | 0.4% | 1.7% | 1.3% | 2.9% | 13.4% | 4.1% | 72.9% | 11.0% | 1.1% | 1.3% | 1.6% |
| Lake Ozark – Rolla | 1.2% | 1.5% | 0.9% | 0.4% | 1.6% | 1.1% | 0.7% | 0.8% | 2.1% | 0.9% | 7.9% | 1.9% | 1.1% | 1.8% |
| Cape Girardeau | 35.6% | 0.7% | 0.1% | 1.4% | 2.8% | 0.1% | 0.1% | 0.0% | 0.8% | 0.1% | 0.9% | 69.5% | 0.1% | 3.0% |
| Southwest | 0.1% | 0.2% | 0.6% | 0.0% | 0.1% | 1.5% | 0.2% | 0.2% | 0.2% | 1.2% | 1.5% | 0.1% | 70.4% | 2.2% |
| South Central | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% | 0.1% | 0.0% | 0.1% | 0.0% | 0.0% | 40.9% |

| Region of Origin Region of College | Bootheel | Central | Kansas City | St. Louis City | St. Louis Metro | Springfield | Northwest | North Central | Northeast | West Central | Lake Ozark – Rolla | Cape Girardeau | Southwest | South Central |
|---------------------------------------|----------|---------|-------------|----------------|-----------------|-------------|-----------|---------------|-----------|--------------|--------------------|----------------|-----------|---------------|
| Bootheel | 2,463 | 2 | 1 | 0 | 8 | 5 | 0 | 0 | 0 | 0 | 0 | 96 | 0 | 15 |
| Central | 409 | 7,681 | 2,612 | 375 | 6,448 | 581 | 505 | 485 | 1,596 | 478 | 1,078 | 507 | 303 | 177 |
| Kansas City | 33 | 151 | 24,029 | 36 | 557 | 112 | 265 | 72 | 43 | 328 | 42 | 31 | 269 | 16 |
| St. Louis City | 14 | 53 | 68 | 4,615 | 6,300 | 11 | 4 | 4 | 12 | 18 | 32 | 71 | 9 | 5 |
| St. Louis Metro | 97 | 484 | 204 | 3,838 | 45,728 | 68 | 18 | 25 | 160 | 38 | 796 | 781 | 30 | 27 |
| Springfield | 384 | 748 | 1,498 | 411 | 2,680 | 12,507 | 203 | 126 | 212 | 498 | 2,299 | 300 | 1,585 | 1,466 |
| Northwest | 5 | 207 | 2,524 | 43 | 295 | 32 | 4,026 | 392 | 253 | 108 | 56 | 13 | 32 | 10 |
| North Central | 0 | 10 | 29 | 0 | 1 | 3 | 328 | 969 | 29 | 16 | 1 | 0 | 1 | 0 |
| Northeast | 52 | 459 | 677 | 537 | 1,840 | 106 | 96 | 121 | 1,350 | 64 | 110 | 85 | 46 | 45 |
| West Central | 45 | 1,579 | 3,266 | 44 | 1,142 | 184 | 164 | 344 | 163 | 4,517 | 620 | 74 | 110 | 54 |
| Lake Ozark – Rolla | 67 | 173 | 323 | 39 | 1,074 | 153 | 39 | 20 | 81 | 55 | 443 | 131 | 92 | 62 |
| Cape Girardeau | 1,984 | 79 | 36 | 138 | 1,936 | 12 | 3 | 1 | 33 | 7 | 50 | 4,789 | 10 | 104 |
| Southwest | 8 | 26 | 213 | 1 | 59 | 206 | 14 | 5 | 9 | 73 | 86 | 10 | 5,921 | 76 |
| South Central | 12 | 2 | 0 | 0 | 1 | 17 | 0 | 0 | 3 | 0 | 8 | 2 | 1 | 1,422 |

*Private 2-year colleges are not included, because those numbers are not available.

Calculated from: Statistical Summary of Higher Education 2000-2001

Table 2 presents the types of institutions Missouri's undergraduates attended in the fall of 2000

In the fall of 2000, 86% of Missouri's undergraduates attended public post-secondary institutions, and of this percentage 41% of Missouri's undergraduate students attended 2-year public institutions. From 21% to 52% of the undergraduate populations in each economic region attended a 2-year institution except for the Northwest where both of the 4-year public institutions award 2-year degrees. In academic year 2000, 18% of the baccalaureate degrees awarded by Missouri's public baccalaureate degree granting institutions were awarded to students who had completed at least 12 hours at a public two-year institution¹. It should be noted from Table 2 that attendance at public 2-year post-secondary institutions is high both for Missouri's most rural regions (North Central, South Central and the Bootheel) and for its most urban regions (Kansas City and St. Louis City).

Table 2: Fall 2000 Total Undergraduate Enrollment by Region of Student Residence

| | Total Public | | Public 2-Year | | Public 4-Year | | Private 4-Year | |
|-----------------------------|--------------|---------|---------------|--------|---------------|--------|----------------|--------|
| Bootheel Region | 96.0% | 5,350 | 46.5% | 2,594 | 49.5% | 2,756 | 4.0% | 223 |
| Central Region | 87.4% | 10,187 | 27.1% | 3,158 | 60.3% | 7,029 | 12.6% | 1,467 |
| Kansas City Region | 93.9% | 33,299 | 48.1% | 17,082 | 45.7% | 16,217 | 6.1% | 2,181 |
| St. Louis City Region | 83.9% | 8,457 | 52.0% | 5,240 | 31.9% | 3,217 | 16.1% | 1,620 |
| St. Louis City Metro Region | 82.7% | 56,267 | 44.2% | 30,065 | 38.5% | 26,202 | 17.3% | 11,802 |
| Springfield Region | 83.1% | 11,630 | 40.0% | 5,592 | 43.1% | 6,038 | 16.9% | 2,367 |
| Northwest Region | 98.2% | 5,565 | 9.0% | 508 | 89.3% | 5,057 | 1.8% | 100 |
| North Central Region | 90.5% | 2,320 | 47.5% | 1,219 | 42.9% | 1,101 | 9.5% | 244 |
| Northeast Region | 70.7% | 2,790 | 28.1% | 1,108 | 42.6% | 1,682 | 29.3% | 1,154 |
| West Central Region | 91.6% | 5,682 | 36.8% | 2,279 | 54.9% | 3,403 | 8.4% | 518 |
| Lake Ozark – Rolla Region | 69.3% | 3,897 | 21.1% | 1,188 | 48.2% | 2,709 | 30.7% | 1,724 |
| Cape Girardeau Region | 92.7% | 6,386 | 44.5% | 3,063 | 48.2% | 3,323 | 7.3% | 504 |
| Southwest Region | 95.5% | 8,033 | 22.9% | 1,923 | 72.7% | 6,110 | 4.5% | 376 |
| South Central Region | 78.7% | 2,739 | 48.2% | 1,676 | 30.6% | 1,063 | 21.3% | 740 |
| | | | | | | | | |
| State Totals | 86.7% | 162,602 | 40.9% | 76,695 | 45.8% | 85,907 | 13.3% | 25,020 |

*Private 2-year college numbers not available. Calculated from: Statistical Summary of Higher Education 2000-01

¹ Source: 2001 Report on Progress Toward the Statewide Public Policy Initiatives and Goals for Missouri Higher Education

Table 3 presents the proportion of degrees by level of degree and discipline awarded by public 4-year (13 institutions), public 2-year (19 institutions), private 4-year (23 institutions) and private 2-year (3 institutions) degree granting institutions between the 1996-97 and 2000-01 academic years. The high percentage of Associates degrees in the arts and humanities is indicative of a high percentage of students pursuing these degrees as stepping stones toward a baccalaureate degree. The next highest percentages of Associates degrees are awarded in health and business. *The highest percentage of both Bachelors and Masters degrees are awarded in business.* The second highest percentage of Bachelors degrees are awarded in social science, and the second highest percentage of Masters degrees are awarded in education. *The highest percentages of Doctoral degrees are awarded in the Other (law) and Health (medicine) categories.*²

Table 3: Percentage of Post-Secondary Degrees Awarded between 1996-97 and 2000-01 by Discipline

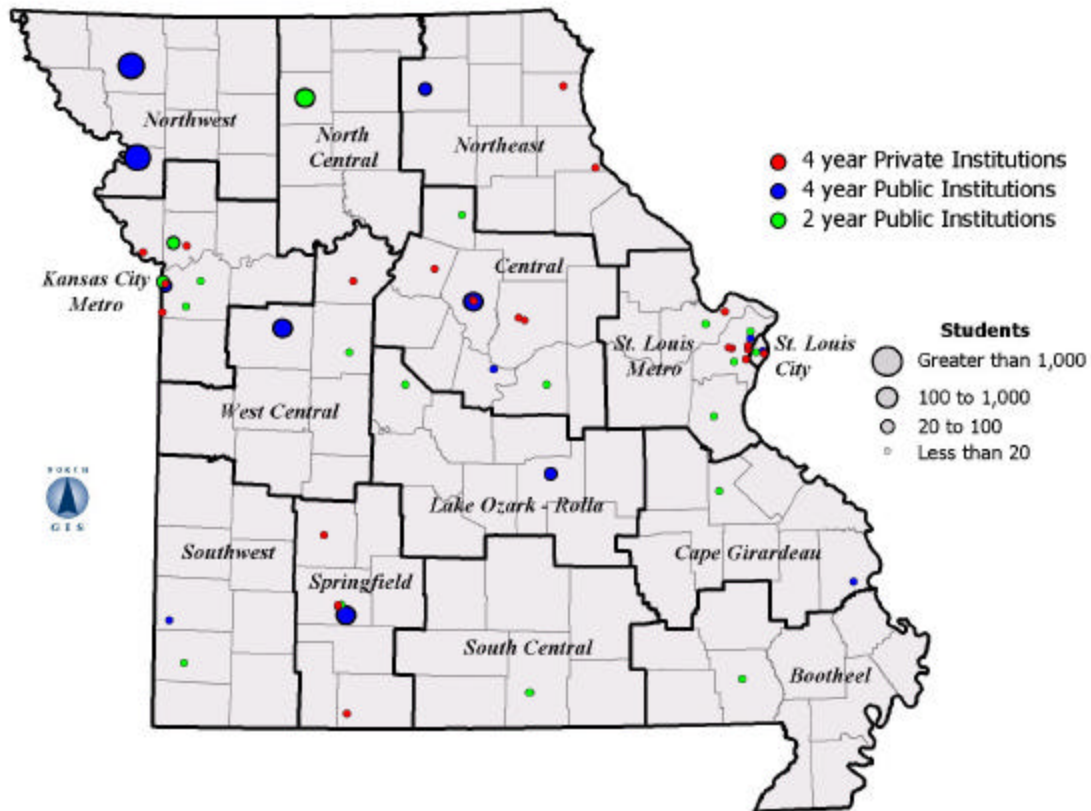
| Academic Course of Study | Associates Degrees | | Bachelors Degrees | | Masters Degrees | | Doctoral Degrees | |
|----------------------------|--------------------|--------|-------------------|---------|-----------------|--------|------------------|--------|
| Agriculture | 1.1% | 428 | 2.3% | 3,086 | 0.4% | 246 | 0.9% | 97 |
| Business | 11.6% | 4,732 | 25.1% | 34,307 | 34.8% | 19,985 | 1.1% | 113 |
| Communications | 0.2% | 64 | 5.2% | 7,132 | 1.4% | 831 | 0.4% | 47 |
| Computer Science | 1.0% | 391 | 3.0% | 4,054 | 1.2% | 662 | 0.3% | 29 |
| Education | 0.4% | 152 | 11.6% | 15,905 | 23.1% | 13,235 | 6.6% | 688 |
| Engineering | 0.2% | 97 | 4.3% | 5,879 | 4.3% | 2,465 | 4.1% | 429 |
| Arts and Humanities | 50.1% | 20,354 | 11.5% | 15,685 | 3.7% | 2,135 | 4.0% | 419 |
| Foreign Language | 0.0% | 4 | 1.0% | 1,330 | 0.6% | 318 | 0.8% | 80 |
| Health | 14.8% | 6,030 | 6.8% | 9,237 | 9.5% | 5,470 | 32.0% | 3,341 |
| Life and Physical Sciences | 0.0% | 13 | 6.2% | 8,428 | 1.9% | 1,081 | 7.9% | 828 |
| Mathematics | 0.0% | 7 | 0.8% | 1,132 | 0.4% | 230 | 0.9% | 92 |
| Public Services | 4.3% | 1,758 | 6.5% | 8,920 | 5.8% | 3,302 | 0.4% | 46 |
| Social Science | 0.4% | 156 | 13.8% | 18,858 | 10.5% | 6,015 | 5.5% | 572 |
| Other | 7.8% | 3,178 | 2.2% | 3,018 | 2.5% | 1,420 | 35.1% | 3,668 |
| Totals | 100.0% | 40,643 | 100.0% | 136,694 | 100.0% | 57,395 | 100.0% | 10,449 |

Source: Statistical Summary of Higher Education 1996-97 through 2000-2001

² See Appendix 1 for the Classification of Instructional Programs (CIP) Codes Associated with the discipline categories.

III. Regional Details

Where Did Undergraduates from the **Northwest Region** Attend School in the Fall of 2000



Post-Secondary Institutions with 20 or More Undergraduates from the Northwest Region (Fall of 2000)

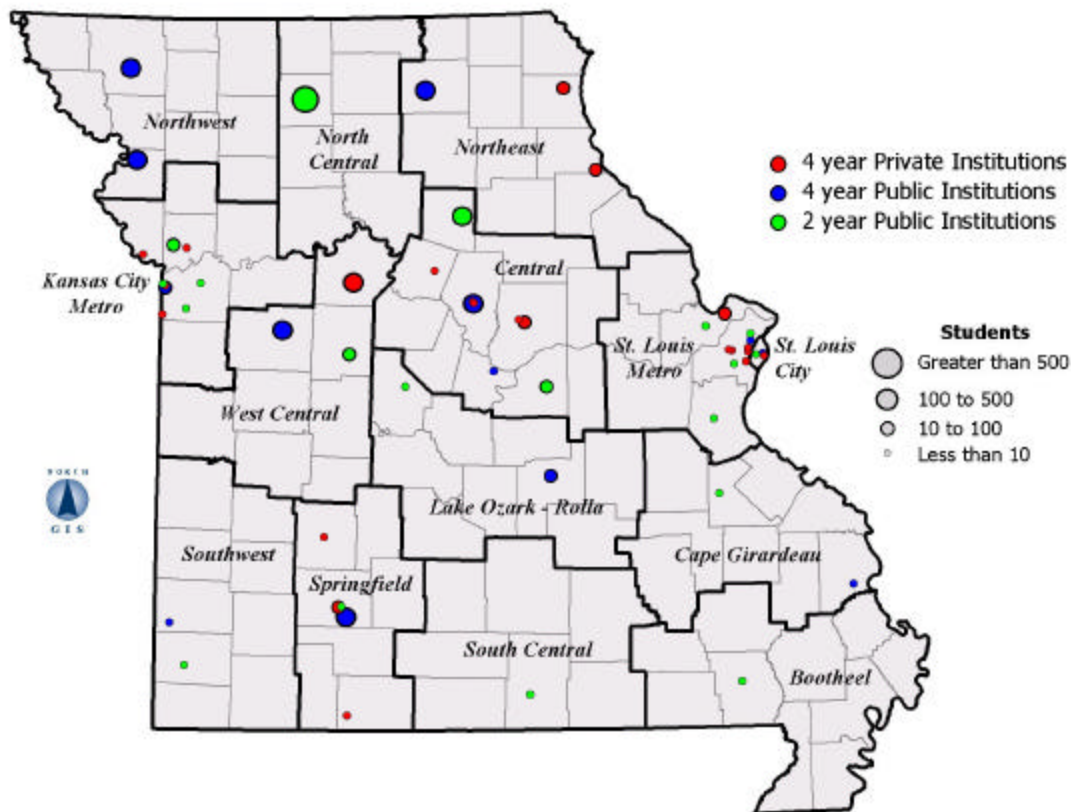
| 20-50 students | 50-100 students | 100-250 students | 250-500 students | 500-1000 students | 1000-2000 students | 2000-4000 students |
|----------------|-----------------|------------------|------------------|-------------------|--------------------|--------------------|
| UMR | UMKC | Central | UMC | | Northwest | Western |
| | Truman | Southwest | North Central | | | |
| | Maple Woods | | | | | |
| | Penn Valley | | | | | |

Types of Degrees Awarded between 1996 and 2000 by the Top Four Post-Secondary Institutions
Attended by Students from the Northwest Region

| Course of Study | Western | | Northwest | | UM – Columbia | | | North Central |
|----------------------------|---------|-------|-----------|-----|---------------|-------|-------|------------------|
| | AS | BA | BA | MA | BA | MA | PhD | AS |
| Agriculture | 0 | 3 | 455 | 22 | 1,294 | 207 | 97 | 68 |
| Business | 36 | 674 | 819 | 125 | 2,349 | 429 | 29 | 166 |
| Communications | 0 | 0 | 351 | 0 | 1,778 | 288 | 47 | 0 |
| Computer Science | 0 | 87 | 75 | 11 | 292 | 73 | 8 | 0 |
| Education | 0 | 403 | 979 | 754 | 1,442 | 1,213 | 357 | 0 |
| Engineering | 0 | 0 | 0 | 0 | 1,692 | 473 | 136 | 0 |
| Arts and Humanities | 0 | 270 | 426 | 30 | 2,715 | 232 | 93 | 434 |
| Foreign Language | 0 | 24 | 9 | 0 | 281 | 59 | 13 | 0 |
| Health | 126 | 375 | 15 | 0 | 1,283 | 464 | 821 | 149 |
| Life and Physical Sciences | 0 | 148 | 116 | 1 | 1,217 | 141 | 196 | 0 |
| Mathematics | 0 | 39 | 20 | 0 | 135 | 57 | 49 | 0 |
| Public Services | 151 | 814 | 216 | 0 | 448 | 512 | 3 | 16 |
| Social Science | 0 | 259 | 729 | 41 | 2,386 | 269 | 195 | 0 |
| Other | 95 | 123 | 66 | 0 | 0 | 213 | 756 | 32 |
| Totals | 408 | 3,219 | 4,276 | 984 | 17,312 | 4,630 | 2,800 | 865 |

Source: Statistical Summary of Higher Education 1996-97 through 2000-2001

Where Did Undergraduates from the **North Central Region** Attend School in the Fall of 2000



Post-Secondary Institutions with 20 or More Undergraduates from the North Central Region (Fall of 2000)

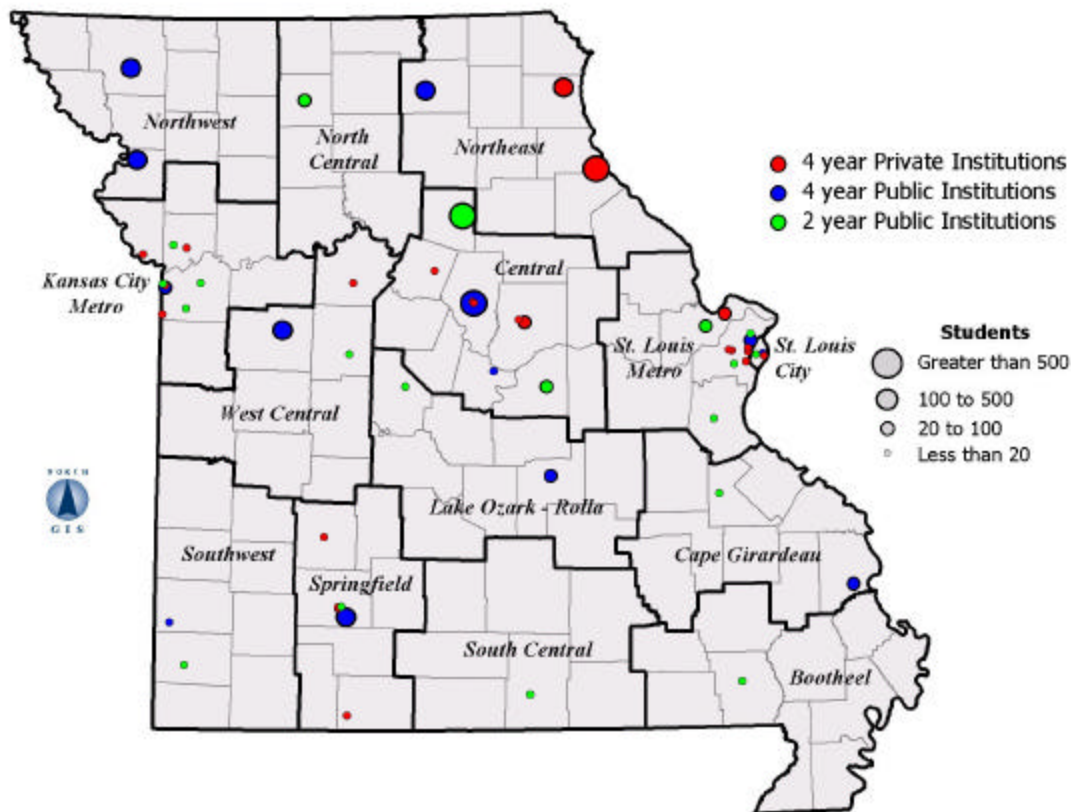
| 20-50 students | 50-100 students | 100-250 students | 250-500 students | 500-1000 students |
|----------------|-----------------|------------------|------------------|-------------------|
| UMKC | | Central | UMC | North Central |
| UMR | | Truman | Western | |
| Maple Woods | | Northwest | | |
| State Fair | | Southwest | | |
| | | Missouri Valley | | |
| | | Moberly | | |

Types of Degrees Awarded between 1996 and 2000 by the Top Three Post-Secondary Institutions
Attended by Students from the North Central Region

| Course of Study | North Central | UM – Columbia | | | Western | |
|----------------------------|---------------|---------------|-------|-------|---------|-------|
| | AS | BA | MA | PhD | AS | BA |
| Agriculture | 68 | 1,294 | 207 | 97 | 0 | 3 |
| Business | 166 | 2,349 | 429 | 29 | 36 | 674 |
| Communications | 0 | 1,778 | 288 | 47 | 0 | 0 |
| Computer Science | 0 | 292 | 73 | 8 | 0 | 87 |
| Education | 0 | 1,442 | 1,213 | 357 | 0 | 403 |
| Engineering | 0 | 1,692 | 473 | 136 | 0 | 0 |
| Arts and Humanities | 434 | 2,715 | 232 | 93 | 0 | 270 |
| Foreign Language | 0 | 281 | 59 | 13 | 0 | 24 |
| Health | 149 | 1,283 | 464 | 821 | 126 | 375 |
| Life and Physical Sciences | 0 | 1,217 | 141 | 196 | 0 | 148 |
| Mathematics | 0 | 135 | 57 | 49 | 0 | 39 |
| Public Services | 16 | 448 | 512 | 3 | 151 | 814 |
| Social Science | 0 | 2,386 | 269 | 195 | 0 | 259 |
| Other | 32 | 0 | 213 | 756 | 95 | 123 |
| Totals | 865 | 17,312 | 4,630 | 2,800 | 408 | 3,219 |

Source: Statistical Summary of Higher Education 1996-97 through 2000-2001

Where Did Undergraduates from the **Northeast Region** Attend School in the Fall of 2000.



Post-Secondary Institutions with 20 or More Undergraduates from the Northeast Region (Fall of 2000)

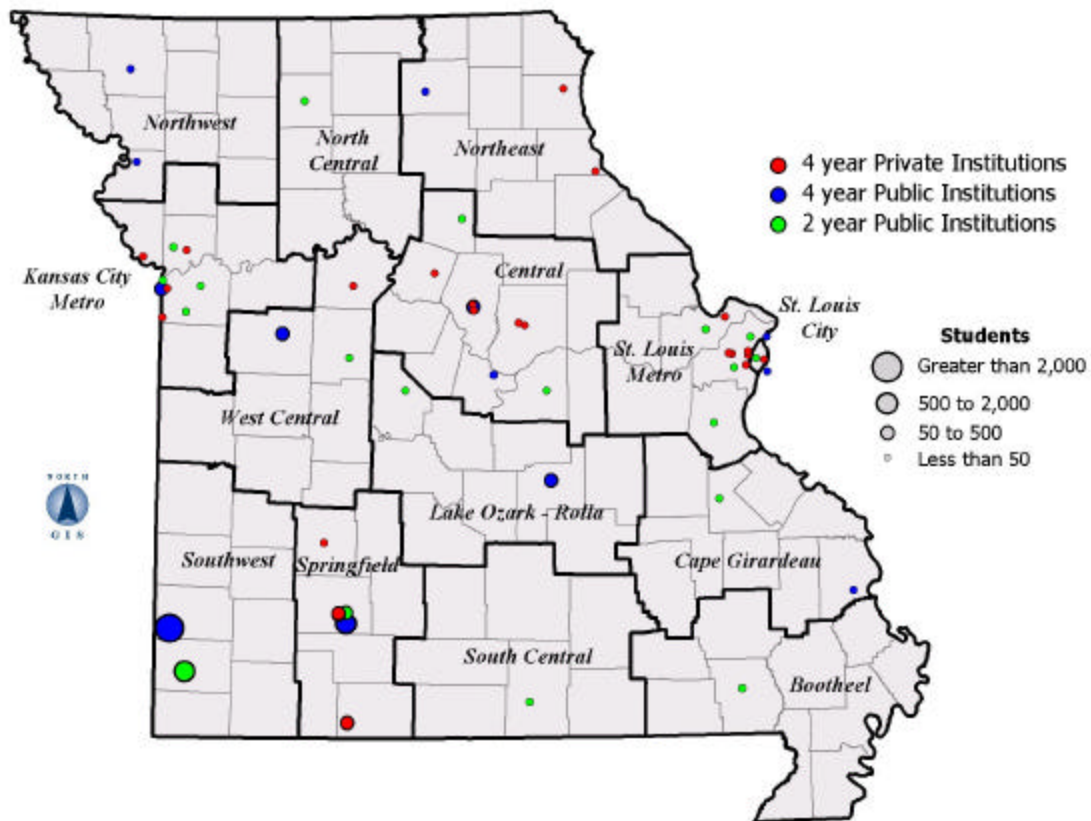
| 20-50 students | 50-100 students | 100-250 students | 250-500 students | 500-1000 students |
|----------------|-----------------|------------------|------------------|--------------------|
| UMKC | UMR | Central | Truman | UMC |
| UMSL | Linn State | Western | Culver-Stockton | Hannibal.-Lagrange |
| Southeast | | Northwest | | Moberly |
| Lindenwood | | Southwest | | |
| Wm. Woods | | | | |
| North Central | | | | |
| St. Charles | | | | |

Types of Degrees Awarded between 1996 and 2000 by the Top Five Post-Secondary Institutions
Attended by Students from the Northeast Region

| Course of Study | UM – Columbia | | | Hannibal – Lagrange | | Moberly | Truman | | | Culver – Stockton |
|-------------------------------|---------------|-------|-------|------------------------|-----|---------|--------|-------|-----|----------------------|
| | BA | MA | PhD | AS | BA | AS | AS | BA | MA | BA |
| Agriculture | 1,294 | 207 | 97 | 0 | 0 | 0 | 0 | 108 | 0 | 0 |
| Business | 2,349 | 429 | 29 | 5 | 185 | 175 | 7 | 1,144 | 42 | 192 |
| Communications | 1,778 | 288 | 47 | 0 | 34 | 0 | 0 | 298 | 0 | 41 |
| Computer Science | 292 | 73 | 8 | 2 | 20 | 16 | 0 | 111 | 0 | 2 |
| Education | 1,442 | 1,213 | 357 | 7 | 182 | 0 | 0 | 0 | 344 | 234 |
| Engineering | 1,692 | 473 | 136 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arts and Humanities | 2,715 | 232 | 93 | 50 | 43 | 664 | 0 | 962 | 61 | 69 |
| Foreign Language | 281 | 59 | 13 | 0 | 0 | 0 | 0 | 102 | 0 | 0 |
| Health | 1,283 | 464 | 821 | 58 | 23 | 211 | 0 | 373 | 70 | 171 |
| Life and Physical Sciences | 1,217 | 141 | 196 | 0 | 9 | 0 | 0 | 806 | 21 | 67 |
| Mathematics | 135 | 57 | 49 | 0 | 4 | 0 | 0 | 109 | 8 | 6 |
| Public Services | 448 | 512 | 3 | 6 | 102 | 6 | 0 | 600 | 0 | 79 |
| Social Science | 2,386 | 269 | 195 | 0 | 19 | 0 | 0 | 1,070 | 56 | 106 |
| Other | 0 | 213 | 756 | 0 | 21 | 32 | 0 | 1 | 0 | 0 |
| Totals | 17,312 | 4,630 | 2,800 | 129 | 642 | 1,104 | 7 | 5,684 | 602 | 967 |

Source: Statistical Summary of Higher Education 1996-97 through 2000-2001

Where Did Undergraduates from the **Southwest Region** Attend School in the Fall of 2000



Post-Secondary Institutions with 20 or More Undergraduates from the Southwest Region (Fall of 2000)

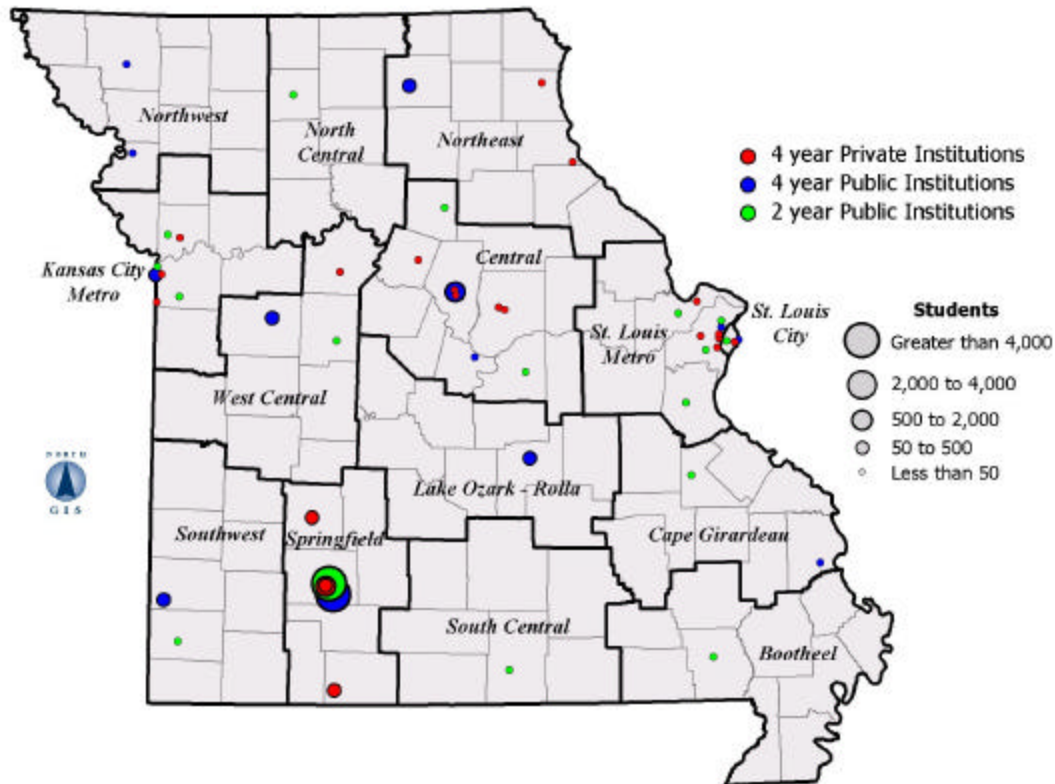
| 20-50 students | 50-100 students | 100-250 students | 250-500 students | 500-1000 students | 1000-2000 students | 2000-4000 students | 4000-6000 students |
|-------------------|-----------------|------------------|------------------|-------------------|--------------------|--------------------|--------------------|
| Truman | UMR | UMKC | UMC | Southwest | Crowder | | Southern |
| Northwest | Central | Drury | Ozarks Tech. | | | | |
| Missouri Valley | Coll. Ozarks | | | | | | |
| Southwest Baptist | Evangel | | | | | | |

Types of Degrees Awarded between 1996 and 2000 by the Top Five Post-Secondary Institutions
Attended by Students from the Southwest Region

| Course of Study | Southern | | Crowder | Southwest | | | UM – Columbia | | | Ozarks Tech. |
|-------------------------------|----------|-------|---------|-----------|--------|-------|---------------|-------|-------|-----------------|
| | AS | BA | | AS | BA | MA | BA | MA | PhD | |
| Agriculture | 0 | 0 | 101 | 0 | 518 | 4 | 1,294 | 207 | 97 | 0 |
| Business | 53 | 727 | 158 | 2 | 3,018 | 451 | 2,349 | 429 | 29 | 279 |
| Communications | 0 | 134 | 17 | 0 | 780 | 78 | 1,778 | 288 | 47 | 2 |
| Computer Science | 79 | 112 | 0 | 0 | 100 | 0 | 292 | 73 | 8 | 6 |
| Education | 0 | 666 | 84 | 0 | 1,688 | 1,150 | 1,442 | 1,213 | 357 | 0 |
| Engineering | 3 | 0 | 7 | 0 | 0 | 0 | 1,692 | 473 | 136 | 0 |
| Arts and Humanities | 78 | 248 | 428 | 92 | 1,169 | 208 | 2,715 | 232 | 93 | 635 |
| Foreign Language | 0 | 16 | 3 | 0 | 42 | 0 | 281 | 59 | 13 | 0 |
| Health | 167 | 186 | 145 | 0 | 559 | 209 | 1,283 | 464 | 821 | 196 |
| Life and Physical Sciences | 0 | 178 | 10 | 0 | 630 | 99 | 1,217 | 141 | 196 | 0 |
| Mathematics | 0 | 13 | 6 | 0 | 44 | 18 | 135 | 57 | 49 | 0 |
| Public Services | 273 | 379 | 8 | 0 | 537 | 128 | 448 | 512 | 3 | 22 |
| Social Science | 0 | 327 | 31 | 0 | 1,404 | 96 | 2,386 | 269 | 195 | 0 |
| Other | 73 | 0 | 122 | 0 | 293 | 20 | 0 | 213 | 756 | 213 |
| Totals | 726 | 2,986 | 1,120 | 94 | 10,782 | 2,461 | 17,312 | 4,630 | 2,800 | 1,353 |

Source: Statistical Summary of Higher Education 1996-97 through 2000-2001

Where Did Undergraduates from the **Springfield Region** Attend School in the Fall of 2000



Post-Secondary Institutions with 20 or More Undergraduates from the Springfield Region (Fall of 2000)

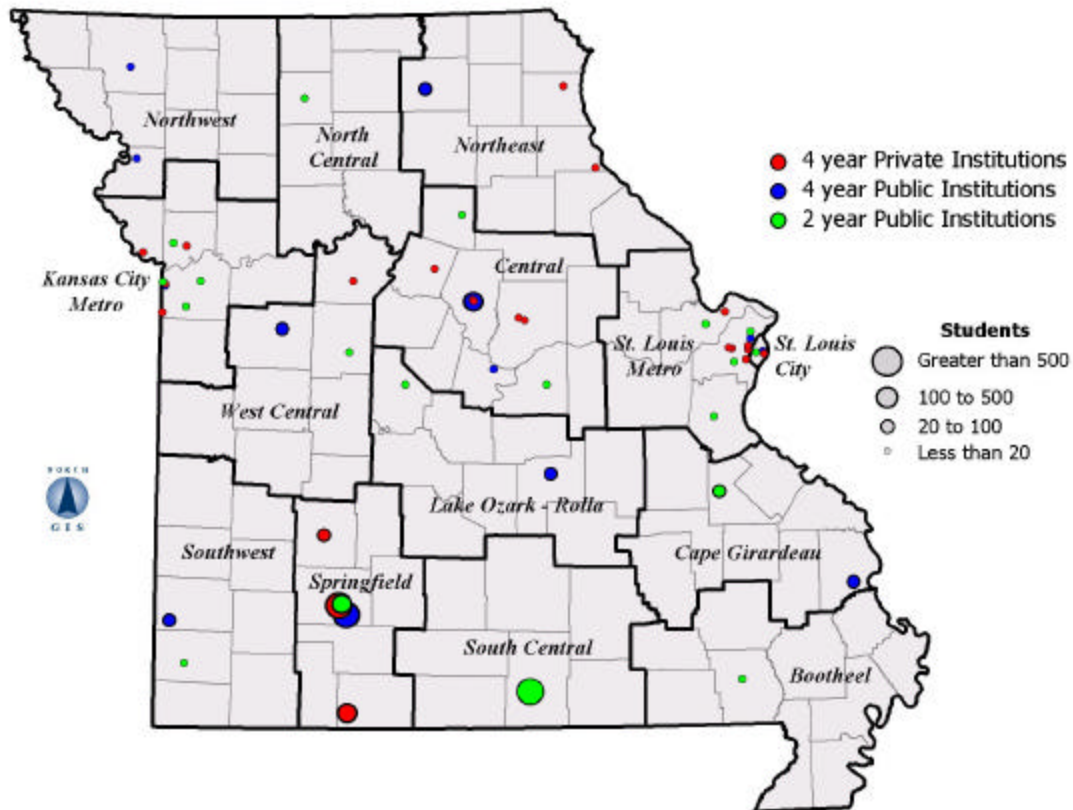
| 20-50 students | 50-100 students | 100-250 students | 250-500 students | 500-1000 students | 1000-2000 students | 2000-4000 students | 4000-6000 students |
|----------------|-----------------|------------------|------------------|-------------------|--------------------|--------------------|--------------------|
| Washington | UMKC | UMR | Coll. Ozarks | UMC | Drury | | Southwest |
| MO Valley | Truman | Central | Evangel | | | | Ozarks Tech. |
| Crowder | SW Baptist | Southern | | | | | |
| State Fair | | | | | | | |

Types of Degrees Awarded between 1996 and 2000 by the Top Four Post-Secondary Institutions
Attended by Students from the Springfield Region

| Course of Study | Southwest | | | Ozarks Tech. | Drury | | | UM – Columbia | | |
|-------------------------------|-----------|--------|-------|-----------------|-------|-------|-----|---------------|-------|-------|
| | AS | BA | MA | | AS | BA | MA | BA | MA | PhD |
| Agriculture | 0 | 518 | 4 | 0 | 0 | 0 | 0 | 1,294 | 207 | 97 |
| Business | 2 | 3,018 | 451 | 279 | 159 | 398 | 105 | 2,349 | 429 | 29 |
| Communications | 0 | 780 | 78 | 2 | 9 | 151 | 7 | 1,778 | 288 | 47 |
| Computer Science | 0 | 100 | 0 | 6 | 0 | 0 | 0 | 292 | 73 | 8 |
| Education | 0 | 1,688 | 1,150 | 0 | 0 | 283 | 364 | 1,442 | 1,213 | 357 |
| Engineering | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,692 | 473 | 136 |
| Arts and Humanities | 92 | 1,169 | 208 | 635 | 263 | 258 | 0 | 2,715 | 232 | 93 |
| Foreign Language | 0 | 42 | 0 | 0 | 0 | 19 | 0 | 281 | 59 | 13 |
| Health | 0 | 559 | 209 | 196 | 33 | 79 | 0 | 1,283 | 464 | 821 |
| Life and Physical Sciences | 0 | 630 | 99 | 0 | 0 | 307 | 0 | 1,217 | 141 | 196 |
| Mathematics | 0 | 44 | 18 | 0 | 0 | 11 | 0 | 135 | 57 | 49 |
| Public Services | 0 | 537 | 128 | 22 | 99 | 228 | 1 | 448 | 512 | 3 |
| Social Science | 0 | 1,404 | 96 | 0 | 0 | 399 | 0 | 2,386 | 269 | 195 |
| Other | 0 | 293 | 20 | 213 | 78 | 119 | 0 | 0 | 213 | 756 |
| Totals | 94 | 10,782 | 2,461 | 1,353 | 641 | 2,252 | 477 | 17,312 | 4,630 | 2,800 |

Source: Statistical Summary of Higher Education 1996-97 through 2000-2001

Where Did Undergraduates from the **South Central Region** Attend School in the Fall of 2000



Post-Secondary Institutions with 20 or More Undergraduates from the South Central Region (Fall of 2000)

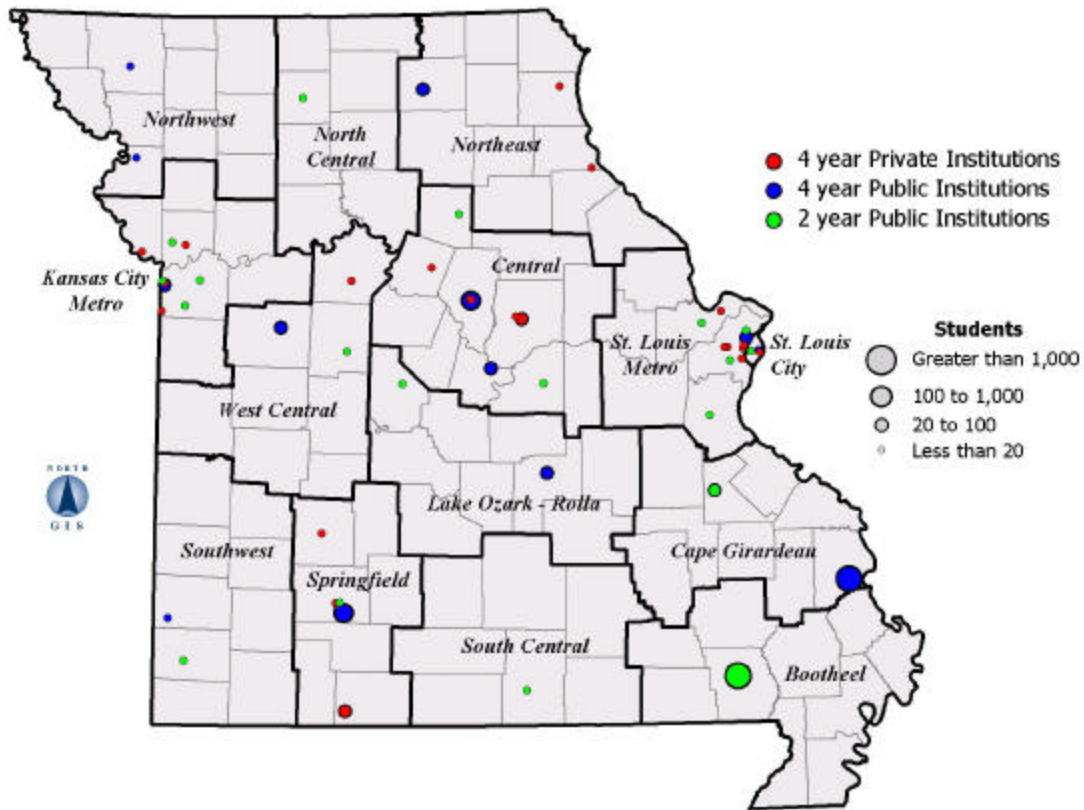
| 20-50 students | 50-100 students | 100-250 students | 250-500 students | 500-1000 students | 1000-2000 students |
|----------------|-----------------|------------------|------------------|-------------------|--------------------|
| Central | UMR | UMC | | Southwest | West Plains |
| Truman | Southern | Coll. Ozarks | | Drury | |
| Southeast | Mineral Area | Ozarks Tech. | | | |
| Evangel | | | | | |
| SW Baptist | | | | | |

Types of Degrees Awarded between 1996 and 2000 by the Top Three Post-Secondary Institutions
Attended by Students from the South Central Region

| Course of Study | West Plains | Southwest | | | Drury | | |
|----------------------------|-------------|-----------|--------|-------|-------|-------|-----|
| | AS | AS | BA | MA | AS | BA | MA |
| Agriculture | 0 | 0 | 518 | 4 | 0 | 0 | 0 |
| Business | 22 | 2 | 3,018 | 451 | 159 | 398 | 105 |
| Communications | 0 | 0 | 780 | 78 | 9 | 151 | 7 |
| Computer Science | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| Education | 0 | 0 | 1,688 | 1,150 | 0 | 283 | 364 |
| Engineering | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arts and Humanities | 416 | 92 | 1,169 | 208 | 263 | 258 | 0 |
| Foreign Language | 0 | 0 | 42 | 0 | 0 | 19 | 0 |
| Health | 137 | 0 | 559 | 209 | 33 | 79 | 0 |
| Life and Physical Sciences | 0 | 0 | 630 | 99 | 0 | 307 | 0 |
| Mathematics | 0 | 0 | 44 | 18 | 0 | 11 | 0 |
| Public Services | 0 | 0 | 537 | 128 | 99 | 228 | 1 |
| Social Science | 0 | 0 | 1,404 | 96 | 0 | 399 | 0 |
| Other | 13 | 0 | 293 | 20 | 78 | 119 | 0 |
| Totals | 588 | 94 | 10,782 | 2,461 | 641 | 2,252 | 477 |

Source: Statistical Summary of Higher Education 1996-97 through 2000-2001

Where Did Undergraduates from the **Bootheel Region** Attend School in the Fall of 2000



Post-Secondary Institutions with 20 or More Undergraduates from the Bootheel Region (Fall of 2000)

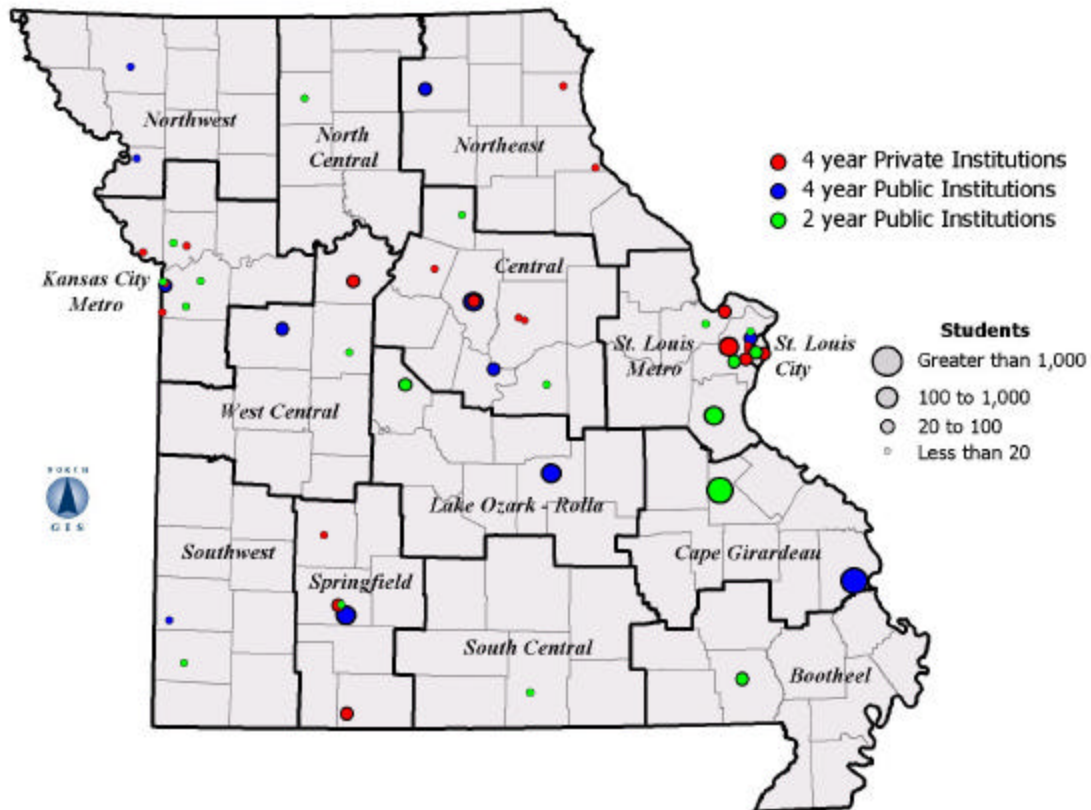
| 20-50 students | 50-100 students | 100-250 students | 250-500 students | 500-1000 students | 1000-2000 students | 2000-4000 students |
|----------------|-----------------|------------------|------------------|-------------------|--------------------|--------------------|
| UMKC | UMR | | UMC | | Southeast | Three Rivers |
| UMSL | Coll. Ozarks | | Southwest | | | |
| Central | Mineral Area | | | | | |
| Lincoln | | | | | | |
| Truman | | | | | | |
| Wm. Woods | | | | | | |

Types of Degrees Awarded between 1996 and 2000 by the Top Four Post-Secondary Institutions
Attended by Students from the Bootheel Region

| Course of Study | Three Rivers | Southeast | | | UM – Columbia | | | Southwest | | |
|----------------------------|--------------|-----------|-------|-----|---------------|-------|-------|-----------|--------|-------|
| | AS | AS | BA | MA | BA | MA | PhD | AS | BA | MA |
| Agriculture | 32 | 0 | 173 | 0 | 1,294 | 207 | 97 | 0 | 518 | 4 |
| Business | 417 | 0 | 856 | 31 | 2,349 | 429 | 29 | 2 | 3,018 | 451 |
| Communications | 0 | 0 | 375 | 0 | 1,778 | 288 | 47 | 0 | 780 | 78 |
| Computer Science | 0 | 0 | 120 | 0 | 292 | 73 | 8 | 0 | 100 | 0 |
| Education | 0 | 0 | 1,324 | 435 | 1,442 | 1,213 | 357 | 0 | 1,688 | 1,150 |
| Engineering | 0 | 3 | 14 | 0 | 1,692 | 473 | 136 | 0 | 0 | 0 |
| Arts and Humanities | 789 | 26 | 994 | 182 | 2,715 | 232 | 93 | 92 | 1,169 | 208 |
| Foreign Language | 0 | 0 | 35 | 0 | 281 | 59 | 13 | 0 | 42 | 0 |
| Health | 174 | 158 | 410 | 157 | 1,283 | 464 | 821 | 0 | 559 | 209 |
| Life and Physical Sciences | 0 | 0 | 306 | 3 | 1,217 | 141 | 196 | 0 | 630 | 99 |
| Mathematics | 0 | 0 | 28 | 0 | 135 | 57 | 49 | 0 | 44 | 18 |
| Public Services | 59 | 0 | 950 | 81 | 448 | 512 | 3 | 0 | 537 | 128 |
| Social Science | 0 | 0 | 411 | 20 | 2,386 | 269 | 195 | 0 | 1,404 | 96 |
| Other | 77 | 10 | 144 | 0 | 0 | 213 | 756 | 0 | 293 | 20 |
| Totals | 1,548 | 197 | 6,140 | 909 | 17,312 | 4,630 | 2,800 | 94 | 10,782 | 2,461 |

Source: Statistical Summary of Higher Education 1996-97 through 2000-2001

Where Did Undergraduates from the **Cape Girardeau Region** Attend School in the Fall of 2000



Post-Secondary Institutions with 20 or More Undergraduates from the Cape Girardeau Region (Fall - 2000)

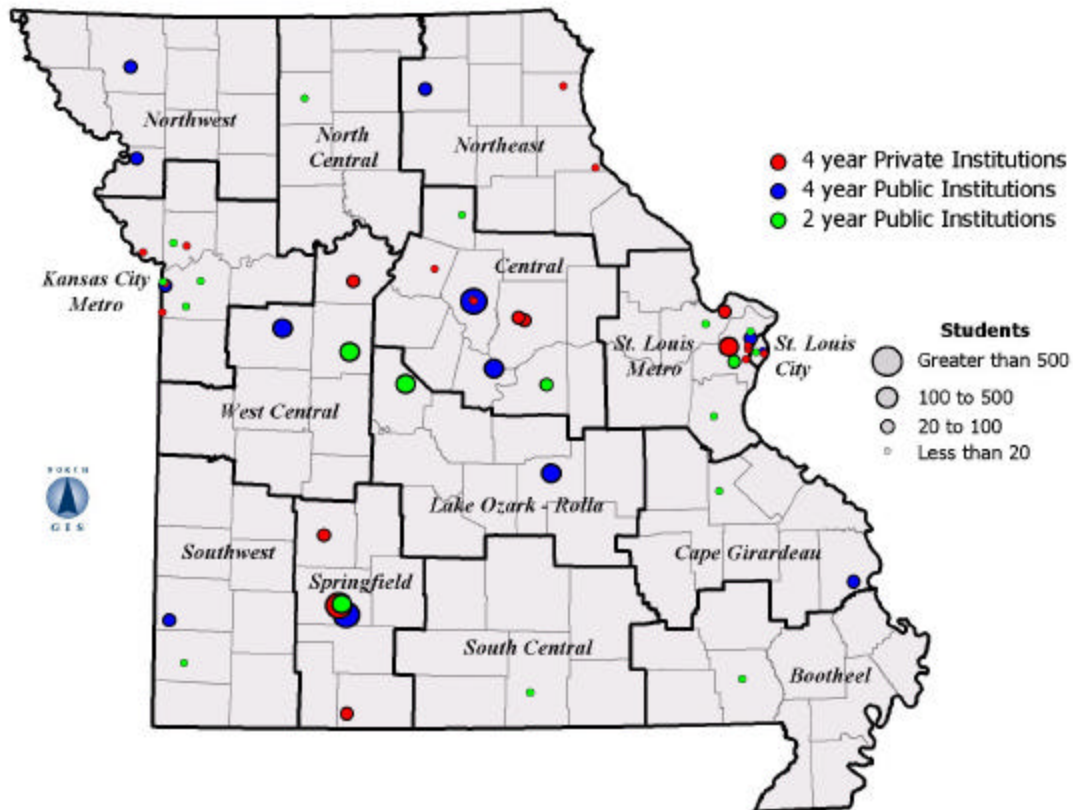
| 20-50 students | 50-100 students | 100-250 students | 250-500 students | 500-1000 students | 1000-2000 students | 2000-4000 students |
|----------------|-----------------|------------------|------------------|-------------------|--------------------|--------------------|
| UMKC | UMSL | UMR | UMC | | | Southeast |
| Central | Lincoln | Southwest | Jefferson | | | Mineral Area |
| St. Louis U. | Truman | MO Baptist | | | | |
| Coll. Ozarks | Lindenwood | | | | | |
| Evangel | Merame | | | | | |
| MO Valley | Three Rivers | | | | | |
| Stephens | | | | | | |
| Webster | | | | | | |
| East Cent. | | | | | | |
| Forest Park | | | | | | |

Types of Degrees Awarded between 1996 and 2000 by the Top Four Post-Secondary Institutions
Attended by Students from the Cape Girardeau Region

| Course of Study | Southeast | | | Mineral Area | UM – Columbia | | | Jefferson |
|-------------------------------|-----------|-------|-----|-----------------|---------------|-------|-------|-----------|
| | AS | BA | MA | | BA | MA | PhD | |
| Agriculture | 0 | 173 | 0 | 3 | 1,294 | 207 | 97 | 0 |
| Business | 0 | 856 | 31 | 145 | 2,349 | 429 | 29 | 321 |
| Communications | 0 | 375 | 0 | 0 | 1,778 | 288 | 47 | 0 |
| Computer Science | 0 | 120 | 0 | 0 | 292 | 73 | 8 | 21 |
| Education | 0 | 1,324 | 435 | 0 | 1,442 | 1,213 | 357 | 0 |
| Engineering | 3 | 14 | 0 | 0 | 1,692 | 473 | 136 | 32 |
| Arts and Humanities | 26 | 994 | 182 | 1,021 | 2,715 | 232 | 93 | 2,703 |
| Foreign Language | 0 | 35 | 0 | 0 | 281 | 59 | 13 | 0 |
| Health | 158 | 410 | 157 | 206 | 1,283 | 464 | 821 | 18 |
| Life and Physical Sciences | 0 | 306 | 3 | 0 | 1,217 | 141 | 196 | 0 |
| Mathematics | 0 | 28 | 0 | 0 | 135 | 57 | 49 | 0 |
| Public Services | 0 | 950 | 81 | 54 | 448 | 512 | 3 | 23 |
| Social Science | 0 | 411 | 20 | 0 | 2,386 | 269 | 195 | 0 |
| Other | 10 | 144 | 0 | 81 | 0 | 213 | 756 | 70 |
| Totals | 197 | 6,140 | 909 | 1,510 | 17,312 | 4,630 | 2,800 | 2,093 |

Source: Statistical Summary of Higher Education 1996-97 through 2000-2001

Where Did Undergraduates from the **Lake Ozark - Rolla Region** Attend School in Fall of 2000



Post-Secondary Institutions with 20 or More Undergraduates from Lake Ozark-Rolla Region (Fall-2000)

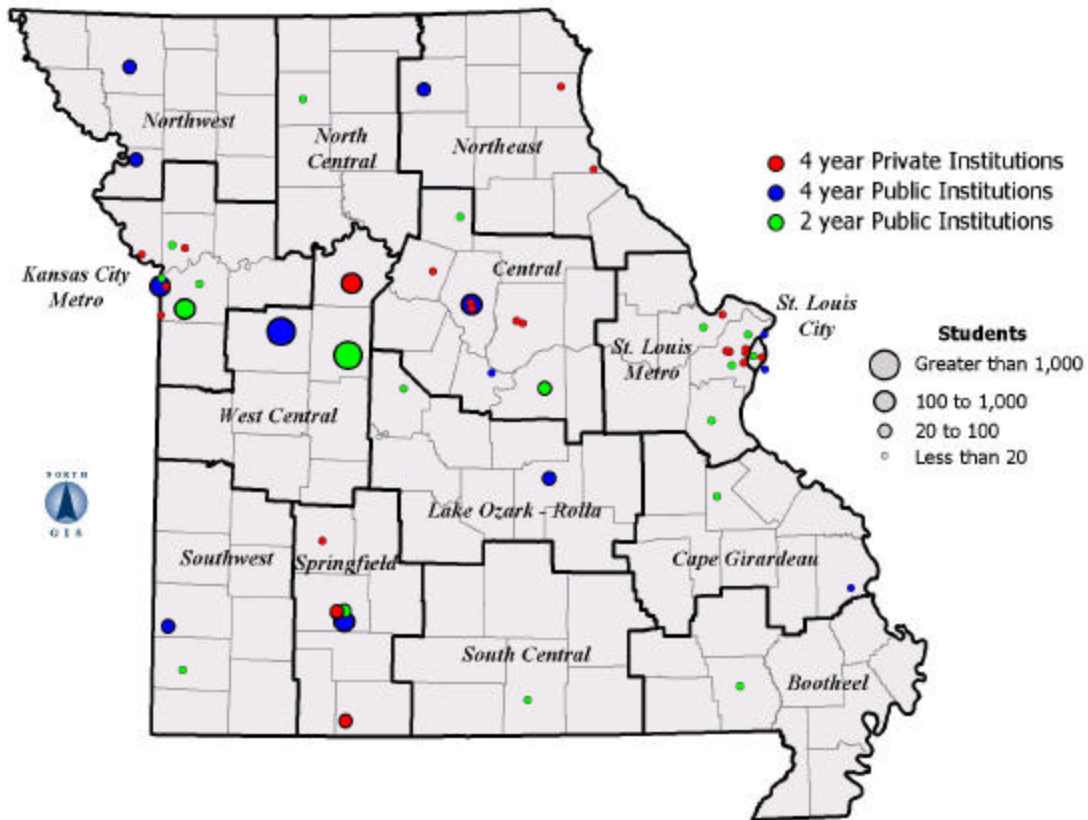
| 20-50 students | 50-100 students | 100-250 students | 250-500 students | 500-1000 students | 1000-2000 students |
|----------------|-----------------|------------------|------------------|-------------------|--------------------|
| UMKC | Southern | MO Baptist | UMR | UMC | Drury |
| UMSL | Truman | | Central | Southwest | |
| Western | Coll. Ozarks | | Lincoln | | |
| Northwest | Linn State | | East Cent. | | |
| Southeast | | | Ozarks Tech. | | |
| Evangel | | | State Fair | | |
| Lindenwood | | | | | |
| MO Valley | | | | | |
| SW Baptist | | | | | |
| Westminster | | | | | |
| Wm. Woods | | | | | |
| Meramec | | | | | |

Types of Degrees Awarded between 1996 and 2000 by the Top Three Post-Secondary Institutions
Attended by Students from the Lake Ozark – Rolla Region

| Course of Study | Drury | | | UM – Columbia | | | Southwest | | |
|----------------------------|-------|-------|-----|---------------|-------|-------|-----------|--------|-------|
| | AS | BA | MA | BA | MA | PhD | AS | BA | MA |
| Agriculture | 0 | 0 | 0 | 1,294 | 207 | 97 | 0 | 518 | 4 |
| Business | 159 | 398 | 105 | 2,349 | 429 | 29 | 2 | 3,018 | 451 |
| Communications | 9 | 151 | 7 | 1,778 | 288 | 47 | 0 | 780 | 78 |
| Computer Science | 0 | 0 | 0 | 292 | 73 | 8 | 0 | 100 | 0 |
| Education | 0 | 283 | 364 | 1,442 | 1,213 | 357 | 0 | 1,688 | 1,150 |
| Engineering | 0 | 0 | 0 | 1,692 | 473 | 136 | 0 | 0 | 0 |
| Arts and Humanities | 263 | 258 | 0 | 2,715 | 232 | 93 | 92 | 1,169 | 208 |
| Foreign Language | 0 | 19 | 0 | 281 | 59 | 13 | 0 | 42 | 0 |
| Health | 33 | 79 | 0 | 1,283 | 464 | 821 | 0 | 559 | 209 |
| Life and Physical Sciences | 0 | 307 | 0 | 1,217 | 141 | 196 | 0 | 630 | 99 |
| Mathematics | 0 | 11 | 0 | 135 | 57 | 49 | 0 | 44 | 18 |
| Public Services | 99 | 228 | 1 | 448 | 512 | 3 | 0 | 537 | 128 |
| Social Science | 0 | 399 | 0 | 2,386 | 269 | 195 | 0 | 1,404 | 96 |
| Other | 78 | 119 | 0 | 0 | 213 | 756 | 0 | 293 | 20 |
| Totals | 641 | 2,252 | 477 | 17,312 | 4,630 | 2,800 | 94 | 10,782 | 2,461 |

Source: Statistical Summary of Higher Education 1996-97 through 2000-2001

Where Did Undergraduates from the **West Central Region** Attend School in the Fall of 2000



Post-Secondary Institutions with 20 or More Undergraduates from the West Central Region (Fall of 2000)

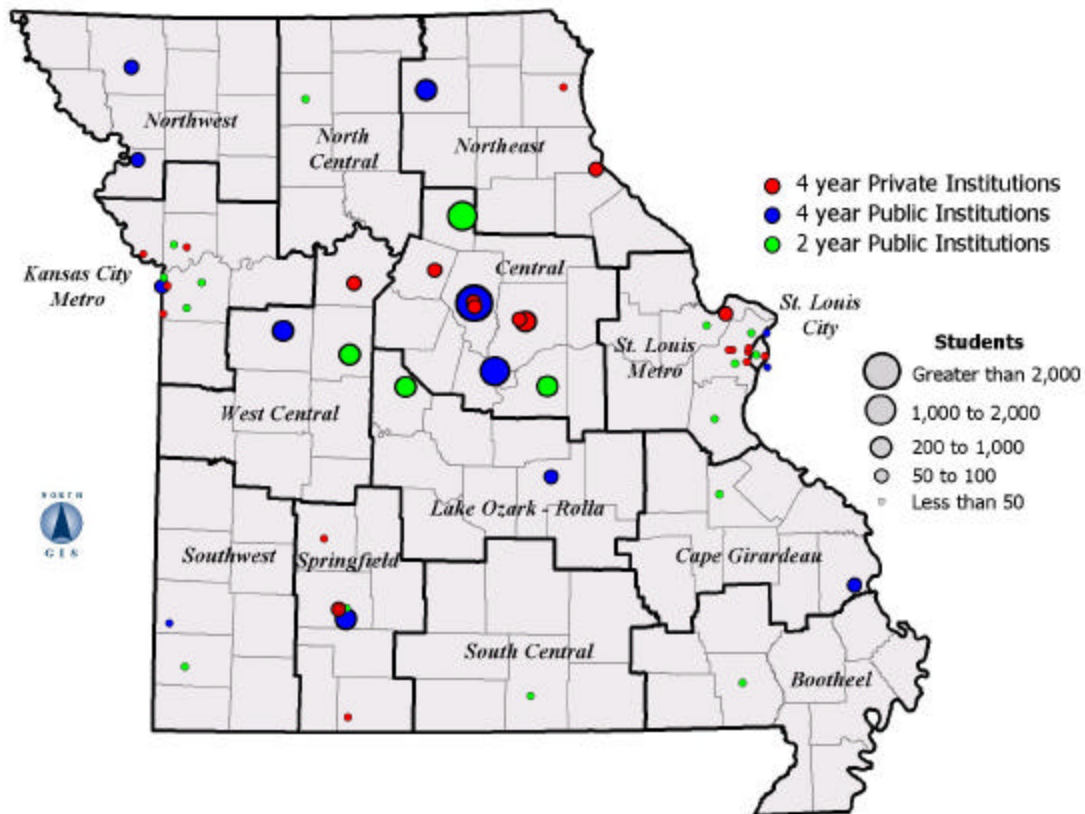
| 20-50 students | 50-100 students | 100-250 students | 250-500 students | 500-1000 students | 1000-2000 students | 2000-4000 students |
|----------------|-----------------|------------------|------------------|-------------------|--------------------|--------------------|
| Western | UMR | UMKC | UMC | | | Central |
| Coll. Ozarks | Southern | Longview | Southwest | | | State Fair |
| Drury | Truman | | Missouri Valley | | | |
| Evangel | Northwest | | | | | |
| Ozarks Tech. | | | | | | |
| Linn State | | | | | | |

Types of Degrees Awarded between 1996 and 2000 by the Top Five Post-Secondary Institutions
Attended by Students from the West Central Region

| Course of Study | Central | | | State Fair | UM – Columbia | | | Southwest | | | Missouri Valley | |
|----------------------------|---------|-------|-------|------------|---------------|-------|-------|-----------|--------|-------|-----------------|-----|
| | AS | BA | MA | AS | BA | MA | PhD | AS | BA | MA | AS | BA |
| Agriculture | 0 | 127 | 6 | 45 | 1,294 | 207 | 97 | 0 | 518 | 4 | 0 | 6 |
| Business | 49 | 1,504 | 149 | 272 | 2,349 | 429 | 29 | 2 | 3,018 | 451 | 3 | 215 |
| Communications | 0 | 366 | 57 | 0 | 1,778 | 288 | 47 | 0 | 780 | 78 | 0 | 22 |
| Computer Science | 0 | 38 | 0 | 0 | 292 | 73 | 8 | 0 | 100 | 0 | 0 | 26 |
| Education | 0 | 1,754 | 798 | 0 | 1,442 | 1,213 | 357 | 0 | 1,688 | 1,150 | 0 | 143 |
| Engineering | 0 | 41 | 68 | 0 | 1,692 | 473 | 136 | 0 | 0 | 0 | 0 | 0 |
| Arts and Humanities | 21 | 643 | 92 | 847 | 2,715 | 232 | 93 | 92 | 1,169 | 208 | 5 | 52 |
| Foreign Language | 0 | 42 | 93 | 0 | 281 | 59 | 13 | 0 | 42 | 0 | 0 | 0 |
| Health | 0 | 429 | 205 | 174 | 1,283 | 464 | 821 | 0 | 559 | 209 | 0 | 18 |
| Life and Physical Sciences | 0 | 240 | 9 | 0 | 1,217 | 141 | 196 | 0 | 630 | 99 | 0 | 59 |
| Mathematics | 0 | 52 | 20 | 0 | 135 | 57 | 49 | 0 | 44 | 18 | 0 | 18 |
| Public Services | 0 | 1,061 | 58 | 1 | 448 | 512 | 3 | 0 | 537 | 128 | 0 | 92 |
| Social Science | 0 | 748 | 351 | 0 | 2,386 | 269 | 195 | 0 | 1,404 | 96 | 0 | 76 |
| Other | 174 | 1,057 | 601 | 61 | 0 | 213 | 756 | 0 | 293 | 20 | 0 | 2 |
| Totals | 244 | 8,102 | 2,507 | 1,400 | 17,312 | 4,630 | 2,800 | 94 | 10,782 | 2,461 | 8 | 729 |

Source: Statistical Summary of Higher Education 1996-97 through 2000-2001

Where Did Undergraduates from the **Central Region** Attend School in the Fall of 2000



Post-Secondary Institutions with 20 or More Undergraduates from the Central Region (Fall of 2000)

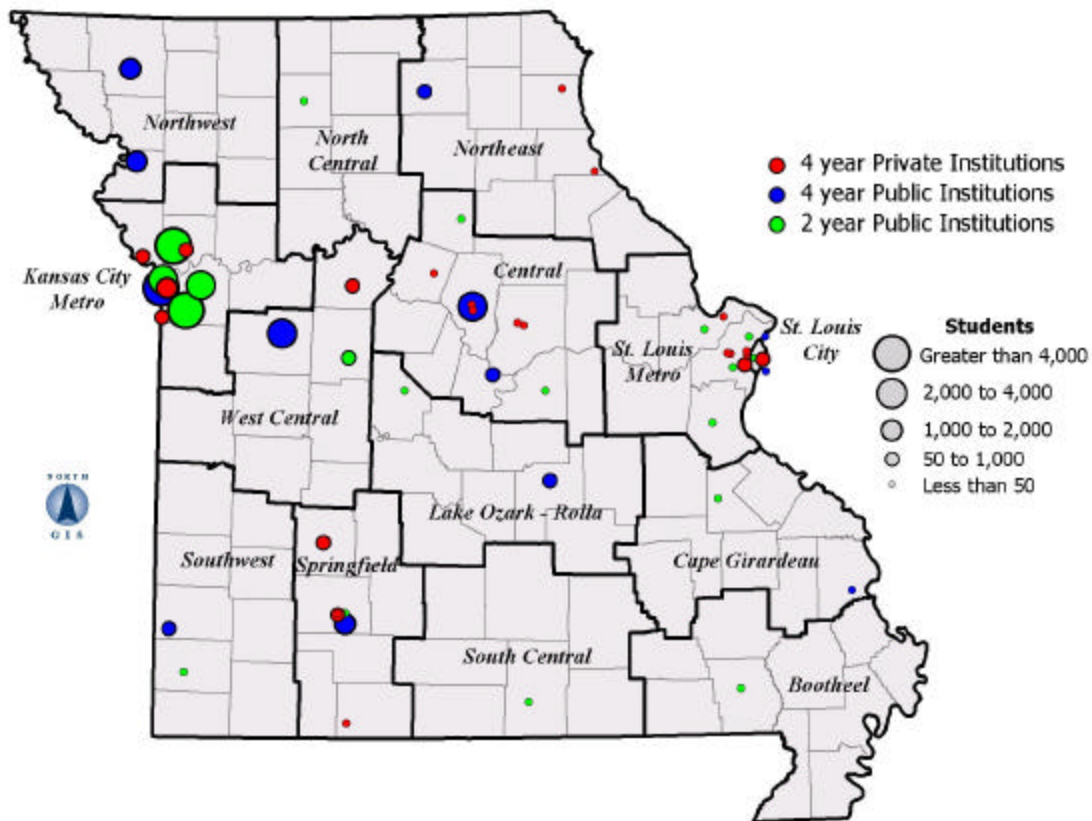
| 20-50 students | 50-100 students | 100-250 students | 250-500 students | 500-1000 students | 1000-2000 students | 2000-4000 students |
|----------------|-----------------|------------------|------------------|-------------------|--------------------|--------------------|
| UMSL | UMKC | UMR | Central | Southwest | Lincoln | UMC |
| Southern | Western | Northwest | Truman | State Fair | Moberly | |
| St. Louis U. | Southeast | Columbia | Wm. Woods | | | |
| Washington | Cent. Meth. | Stephens | Linn State | | | |
| Culver-Stock. | Drury | Westminster | | | | |
| Evangel | Hann.-Lagr. | East Cent. | | | | |
| Rockhurst | Lindenwood | | | | | |
| SW Baptist | MO Valley | | | | | |
| Webster | | | | | | |
| Ozarks Tech. | | | | | | |
| St. Charles | | | | | | |
| Merame | | | | | | |

Types of Degrees Awarded between 1996 and 2000 by the Top Five Post-Secondary Institutions Attended by Students from the Central Region

| Course of Study | UM – Columbia | | | Lincoln | | | Moberly | Southwest | | | State Fair |
|----------------------------|---------------|-------|-------|---------|-------|-----|---------|-----------|--------|-------|------------|
| | BA | MA | PhD | AS | BA | MA | AS | AS | BA | MA | AS |
| Agriculture | 1,294 | 207 | 97 | 1 | 83 | 0 | 0 | 0 | 518 | 4 | 45 |
| Business | 2,349 | 429 | 29 | 5 | 389 | 69 | 175 | 2 | 3,018 | 451 | 272 |
| Communications | 1,778 | 288 | 47 | 0 | 33 | 0 | 0 | 0 | 780 | 78 | 0 |
| Computer Science | 292 | 73 | 8 | 17 | 136 | 0 | 16 | 0 | 100 | 0 | 0 |
| Education | 1,442 | 1,213 | 357 | 0 | 244 | 244 | 0 | 0 | 1,688 | 1,150 | 0 |
| Engineering | 1,692 | 473 | 136 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arts and Humanities | 2,715 | 232 | 93 | 0 | 140 | 0 | 664 | 92 | 1,169 | 208 | 847 |
| Foreign Language | 281 | 59 | 13 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 0 |
| Health | 1,283 | 464 | 821 | 296 | 36 | 0 | 211 | 0 | 559 | 209 | 174 |
| Life and Physical Sciences | 1,217 | 141 | 196 | 0 | 42 | 0 | 0 | 0 | 630 | 99 | 0 |
| Mathematics | 135 | 57 | 49 | 0 | 17 | 0 | 0 | 0 | 44 | 18 | 0 |
| Public Services | 448 | 512 | 3 | 6 | 149 | 0 | 0 | 0 | 537 | 128 | 1 |
| Social Science | 2,386 | 269 | 195 | 0 | 169 | 59 | 0 | 0 | 1,404 | 96 | 0 |
| Other | 0 | 213 | 756 | 20 | 15 | 0 | 32 | 0 | 293 | 20 | 61 |
| Totals | 17,312 | 4,630 | 2,800 | 356 | 1,453 | 372 | 1,104 | 94 | 10,782 | 2,461 | 1,400 |

Source: Statistical Summary of Higher Education 1996-97 through 2000-2001

Where Did Undergraduates from the **Kansas City Metro Region** Attend School in Fall of 2000



Post-Secondary Institutions with 20 or More Undergraduates from Kansas City Metro Region (Fall-2000)

| 20-50 students | 50-100 students | 100-250 students | 250-500 students | 500-1000 students | 1000-2000 students | 2000-4000 students | 4000-6000 students |
|----------------|-----------------|------------------|------------------|-------------------|--------------------|--------------------|--------------------|
| Southeast | St. Louis U. | Lincoln | UMR | Truman | Western | UMC | UMKC |
| Washington | Drury | Southern | | | Northwest | Central | Longview |
| Cent. Meth. | Park | Avila | | | Southwest | Blue River | Maple Woods |
| Coll. Ozarks | SW Baptist | MO Valley | | | Rockhurst | Penn Valley | |
| Hann.-Lagr. | Webster | Wm. Jewell | | | | | |
| Lindenwood | State Fair | | | | | | |
| Stephens | | | | | | | |
| Westminster | | | | | | | |
| Wm. Woods | | | | | | | |
| North Cent. | | | | | | | |

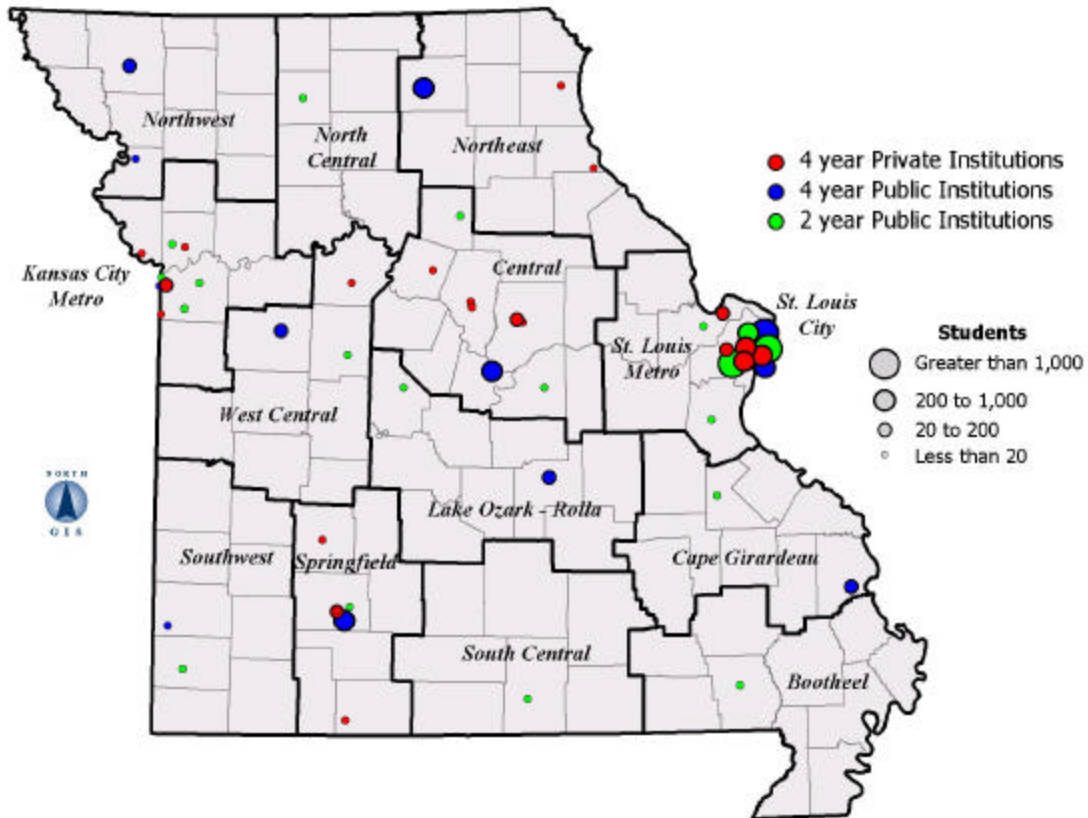
Types of Degrees Awarded between 1996 and 2000 by the Top Six Post-Secondary Institutions Attended by Students from the Kansas City Metro Region

| Course of Study | UM – Kansas City | | | Longview | Maple Woods | UM – Columbia | | | Central | | | Penn Valley |
|----------------------------|------------------|-------|-------|----------|-------------|---------------|-------|-------|---------|-------|-------|-------------|
| | BA | MA | PhD | AS | AS | BA | MA | PhD | AS | BA | MA | AS |
| Agriculture | 0 | 0 | 0 | 11 | 0 | 1,294 | 207 | 97 | 0 | 127 | 6 | 0 |
| Business | 675 | 963 | 0 | 152 | 107 | 2,349 | 429 | 29 | 49 | 1,504 | 149 | 81 |
| Communications | 250 | 26 | 0 | 0 | 0 | 1,778 | 288 | 47 | 0 | 366 | 57 | 0 |
| Computer Science | 210 | 173 | 0 | 21 | 8 | 292 | 73 | 8 | 0 | 38 | 0 | 9 |
| Education | 396 | 987 | 19 | 0 | 0 | 1,442 | 1,213 | 357 | 0 | 1,754 | 798 | 0 |
| Engineering | 0 | 0 | 0 | 32 | 5 | 1,692 | 473 | 136 | 0 | 41 | 68 | 12 |
| Arts and Humanities | 1,321 | 398 | 198 | 2,703 | 990 | 2,715 | 232 | 93 | 21 | 643 | 92 | 822 |
| Foreign Language | 75 | 23 | 0 | 0 | 0 | 281 | 59 | 13 | 0 | 42 | 93 | 0 |
| Health | 310 | 447 | 940 | 18 | 102 | 1,283 | 464 | 821 | 0 | 429 | 205 | 572 |
| Life and Physical Sciences | 776 | 110 | 8 | 0 | 0 | 1,217 | 141 | 196 | 0 | 240 | 9 | 0 |
| Mathematics | 33 | 12 | 2 | 0 | 0 | 135 | 57 | 49 | 0 | 52 | 20 | 0 |
| Public Services | 166 | 229 | 0 | 20 | 23 | 448 | 512 | 3 | 0 | 1,061 | 58 | 36 |
| Social Science | 971 | 161 | 40 | 0 | 0 | 2,386 | 269 | 195 | 0 | 748 | 351 | 0 |
| Other | 0 | 114 | 716 | 92 | 70 | 0 | 213 | 756 | 174 | 1,057 | 601 | 49 |
| Totals | 5,183 | 3,643 | 1,923 | 3,049 | 1,305 | 17,312 | 4,630 | 2,800 | 244 | 8,102 | 2,507 | 1,581 |

Note: Blue River has not yet graduated a class.

Source: Statistical Summary of Higher Education 1996-97 through 2000-2001

Where Did Undergraduates from the **St. Louis City Region** Attend School in the Fall of 2000



Post-Secondary Institutions with 20 or More Undergraduates from the St. Louis City Region (Fall of 2000)

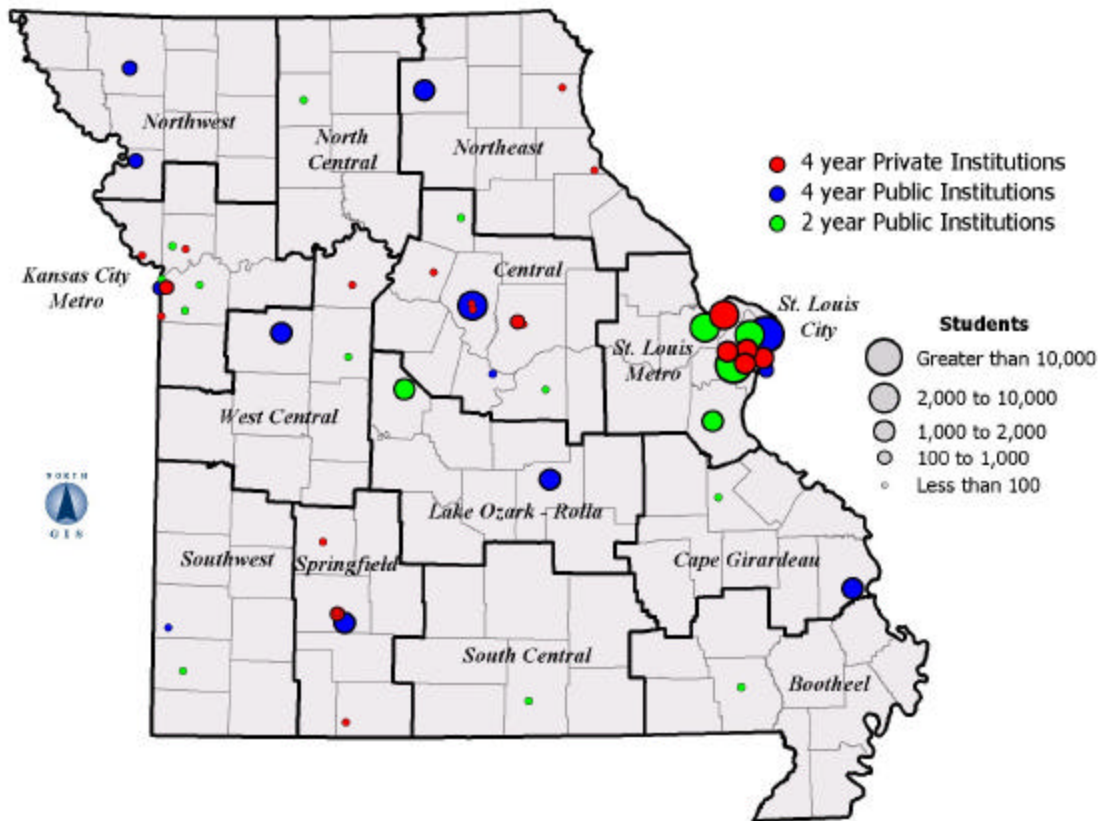
| 20-50 students | 50-100 students | 100-250 students | 250-500 students | 500-1000 students | 1000-2000 students | 2000-4000 students |
|----------------|-----------------|------------------|------------------|-------------------|--------------------|--------------------|
| UMR | Lindenwood | Southeast | Lincoln | Harris-Stowe | UMSL | Forest Park |
| Central | | MO Baptist | Southwest | Truman | Merame | |
| Northwest | | | Washington | St. Louis U. | | |
| Drury | | | Webster | Flo. Valley | | |
| Fontbonne | | | | | | |
| Rockhurst | | | | | | |
| Westminster | | | | | | |

Types of Degrees Awarded between 1996 and 2000 by the Top Seven Post-Secondary Institutions Attended by Students from the St. Louis City Region

| Course of Study | Forest Park | UM – St. Louis | | | Meramec | Harris – Stowe | Truman | | | St. Louis Univ. | | | | Florissant Valley |
|----------------------------|-------------|----------------|-------|-----|---------|----------------|--------|-------|-----|-----------------|-------|-------|-------|-------------------|
| | AS | BA | MA | PhD | AS | BA | AS | BA | MA | AS | BA | MA | PhD | AS |
| Agriculture | 0 | 0 | 0 | 0 | 85 | 0 | 0 | 108 | 0 | 0 | 5 | 0 | 0 | 0 |
| Business | 354 | 2,186 | 438 | 0 | 354 | 173 | 7 | 1,144 | 42 | 0 | 1,529 | 1,292 | 43 | 209 |
| Communications | 0 | 523 | 0 | 0 | 0 | 0 | 0 | 298 | 0 | 1 | 406 | 48 | 0 | 0 |
| Computer Science | 0 | 123 | 1 | 0 | 0 | 0 | 0 | 111 | 0 | 1 | 95 | 0 | 0 | 0 |
| Education | 0 | 1,622 | 1,522 | 38 | 0 | 591 | 0 | 0 | 344 | 0 | 261 | 132 | 272 | 0 |
| Engineering | 0 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 176 | 26 | 0 | 0 |
| Arts and Humanities | 801 | 749 | 93 | 0 | 2,419 | 0 | 0 | 962 | 61 | 0 | 346 | 62 | 39 | 1,741 |
| Foreign Language | 0 | 77 | 0 | 0 | 0 | 0 | 0 | 102 | 0 | 0 | 110 | 54 | 0 | 0 |
| Health | 593 | 692 | 355 | 210 | 695 | 1 | 0 | 373 | 70 | 0 | 1,529 | 1,053 | 772 | 336 |
| Life and Physical Sciences | 0 | 442 | 215 | 50 | 0 | 0 | 0 | 806 | 21 | 0 | 656 | 122 | 97 | 0 |
| Mathematics | 0 | 52 | 21 | 0 | 0 | 0 | 0 | 109 | 8 | 0 | 57 | 23 | 3 | 0 |
| Public Services | 311 | 329 | 50 | 0 | 201 | 24 | 0 | 600 | 0 | 0 | 240 | 519 | 17 | 205 |
| Social Science | 0 | 1,474 | 255 | 60 | 0 | 0 | 0 | 1,070 | 56 | 0 | 845 | 119 | 105 | 0 |
| Other | 271 | 0 | 0 | 0 | 205 | 0 | 0 | 1 | 0 | 40 | 352 | 26 | 1,213 | 255 |
| Totals | 2,282 | 8,325 | 2,950 | 358 | 3,959 | 789 | 7 | 5,684 | 602 | 42 | 6,607 | 3,476 | 2,561 | 2,746 |

Source: Statistical Summary of Higher Education 1996-97 through 2000-2001

Where Did Undergraduates from the **St. Louis Metro Region** Attend School in the Fall of 2000



Post-Secondary Institutions with 20 or More Undergraduates from the St. Louis Metro Region (Fall of 2000)

| 20-50 students | 50-100 students | 100-250 students | 250-500 students | 500-1000 students | 1000-2000 students | 2000-4000 students | 4000-6000 students | 6000-8000 students | Greater than 8000 |
|-----------------------|--------------------|------------------|------------------|-------------------|--------------------|----------------------|--------------------|--------------------|-------------------|
| Central Methodist | Southern | Western | UMKC | Harris-Stowe | UMR | Southwest | St. Charles | UMC | UMSL |
| College of the Ozarks | Culver-Stockton | Northwest | Rockhurst | | Central | St. Louis University | Florissant Valley | | Meramec |
| Evangel | Hannibal.-Lagrange | Drury | | | Truman | Lindenwood | | | |
| Southwest Baptist | Missouri Valley | Fontbonne | | | Southeast | East Cent. | | | |
| Wm. Jewell | Wm. Woods | Maryville | | | Washington | Jefferson | | | |
| Mineral Area | Linn State | Westminster | | | Missouri Baptist | Forest Park | | | |
| Moberly | | | | | Webster | | | | |
| Ozarks Tech. | | | | | | | | | |
| State Fair | | | | | | | | | |

Types of Degrees Awarded between 1996 and 2000 by the Top Five Post-Secondary Institutions Attended by Students from the St. Louis Metro Region

| Course of Study | UM – St. Louis | | | Meramec | UM – Columbia | | | St. Charles | Florissant Valley |
|----------------------------|----------------|------|-----|---------|---------------|-------|-------|-------------|-------------------|
| | BA | MA | PhD | | BA | MA | PhD | | |
| Agriculture | 0 | 0 | 0 | 85 | 1,294 | 207 | 97 | 0 | 0 |
| Business | 2,186 | 438 | 0 | 354 | 2,349 | 429 | 29 | 186 | 209 |
| Communications | 523 | 0 | 0 | 0 | 1,778 | 288 | 47 | 0 | 0 |
| Computer Science | 123 | 1 | 0 | 0 | 292 | 73 | 8 | 8 | 0 |
| Education | 1,622 | 1522 | 38 | 0 | 1,442 | 1,213 | 357 | 52 | 0 |
| Engineering | 56 | 0 | 0 | 0 | 1,692 | 473 | 136 | 12 | 0 |
| Arts and Humanities | 749 | 93 | 0 | 2,419 | 2,715 | 232 | 93 | 827 | 1,741 |
| Foreign Language | 77 | 0 | 0 | 0 | 281 | 59 | 13 | 0 | 0 |
| Health | 692 | 355 | 210 | 695 | 1,283 | 464 | 821 | 303 | 336 |
| Life and Physical Sciences | 442 | 215 | 50 | 0 | 1,217 | 141 | 196 | 3 | 0 |
| Mathematics | 52 | 21 | 0 | 0 | 135 | 57 | 49 | 1 | 0 |
| Public Services | 329 | 50 | 0 | 201 | 448 | 512 | 3 | 24 | 205 |
| Social Science | 1,474 | 255 | 60 | 0 | 2,386 | 269 | 195 | 9 | 0 |
| Other | 0 | 0 | 0 | 205 | 0 | 213 | 756 | 44 | 255 |
| Totals | 8,325 | 2950 | 358 | 3,959 | 17,312 | 4,630 | 2,800 | 1,469 | 2,746 |

Source: Statistical Summary of Higher Education 1996-97 through 2000-2001IV.

Policy

IV. Policy Implications

From the above study it is evident that Missouri's colleges and universities are providing a particular mix of skills for its future workforce. The best provisioned area of expertise, from the Associates degree level through the Doctoral degree, is business. These skills are being well provided for by Missouri's post-secondary institutions. The second best populated subject area across a broad spectrum of expertise is education, followed by the biological and life sciences. Missouri awards most of its baccalaureate and higher level degrees in business, education and health. This evidence argues that [Missouri is well prepared to target the life science industries for growth and expansion](#). The production of engineers, mathematicians and computer scientists must be increased if Missouri is to meet the employment needs of information technology and advanced manufacturing.

Implications for the Target Missouri 2 Initiative

The Target Missouri 2 (TM2) initiative assists local, regional, and state economic developers through improved information, to attract those industries with the greatest impact for Missouri's economy. TM2 seeks to take into account the sub-economies within the state and identify which industries will generate the greatest regional economic impact, acknowledging that different industries may affect different regions differently. TM2 is currently targeting the information technology, advanced manufacturing, and life sciences industries in general for Missouri, because of their higher than average wage and high potential for growth in the national economy. This study indicates that Missouri is well prepared for growth in the life sciences industry. It further indicates that growth in the information technology and advanced manufacturing industries will be limited by a lack of skilled personnel.

The effort to remedy the scarcity of engineers, mathematicians and computer scientists can be enhanced by enlisting Missouri's information technology and advanced manufacturing businesses in improving the awareness of high school students of potential career opportunities. Sustained school-business partnerships and tutorial programs could greatly improve student interest, support student efforts, and reduce the need for remediation during the first year of college. Furthermore, regional information technology and advanced manufacturing businesses should be encouraged to consult with post-secondary institutions in their regions on the training of both current and prospective employees. Economies of scale in training as well as improved expansion planning may be realized for Missouri's target industries, as regional institutions prove responsive to tailoring programs to specific student populations.

Implications for the K-16 Coalition

In December 1997, the State Board of Education, the Coordinating Board for Higher Education, and the University of Missouri Board of Curators, created the Missouri K-16 Coalition as a partnership among business, education, and political leaders. The Missouri K-16 Coalition is committed to quality education at all levels, and exemplifies a mode of cooperation among Missouri's education policymakers. The regional character of post-secondary attendance will impact any K-16 Coalition efforts to prepare Missouri's future workforce. Because of its high usage among undergraduates, the 2-year college system should be viewed and used as an asset in the effort to ease transition into post-secondary education. Furthermore, the K-16 Coalition must begin its efforts to improve mathematics and science education well before the 11th grade if it is to have a significant effect on post-secondary rates of graduation in mathematics and the physical sciences.

V. Summary and Conclusions

Missouri is well prepared across a broad range of expertise to support growth in the life science industries. Missouri's production of engineers, mathematicians and computer scientists must be increased if it is to meet the needs of information technology and advanced manufacturing. Any effort to increase the number of engineers, mathematicians and computer scientists graduating in Missouri must begin in Missouri's public schools with an increased focus on algebra, geometry, trigonometry, and the basic principles of the physical sciences. The Regional Professional Development Centers (RPDC) as a strategically placed part of the Department of Elementary and Secondary Education's educational infrastructure, may be best positioned to lead in this effort. Regional businesses should be enlisted to aid in conveying the importance of math and science for students' futures. Regional businesses should also be encouraged to consult with post-secondary institutions in their regions on the training of current and prospective employees. Economies of scale in training as well as improved expansion planning may be realized for Missouri businesses, as regional institutions prove responsive to tailoring programs to specific student populations. Emphasis on a regional approach to skills development will also promote economic development strategies, considering that students usually attend undergraduate institutions near their homes.

Appendix 1: Classification of Instructional Programs for each CBHE Category

Source: Statistical Summary of Higher Education 1999-2000

| CBHE Category | CIP Name | CIP Code |
|----------------------------|--|----------|
| Agriculture | Agribusiness and Agricultural Production | 01 |
| | Agricultural Sciences | 02 |
| | Renewable Natural Resources | 03 |
| Business | Business Management/ Admin. Services | 52 |
| | (previously 06 and 07) | |
| Communications | Marketing and Distribution | 08 |
| | Communications | 09 |
| | Communications Technologies | 10 |
| Computer Science | Computer and Information Sciences | 11 |
| Education | Education | 13 |
| Engineering | Engineering | 14 |
| Arts and Humanities | Home Economics | 19 |
| | Vocational Home Economics | 20 |
| | Letters | 23 |
| | Liberal/ General Studies | 24 |
| | Multi-Interdisciplinary Studies | 30 |
| | Philosophy and Religion | 38 |
| | Visual and Performing Arts | 50 |
| Foreign Languages | Foreign Languages | 16 |
| Health | Health Professional/ Related Sciences | 51 |
| | (previously 17 and 18) | |
| Life and Physical Sciences | Life Sciences | 26 |
| | Physical Sciences | 40 |
| Math | Mathematics | 27 |
| Public Services | Parks and Recreation | 31 |
| | Protective Services | 43 |
| | Public Affairs | 44 |
| Social Sciences | Area and Ethnic Studies | 05 |
| | Psychology | 42 |
| | Social Sciences | 45 |
| Other | Engineering and Engineering Related Technologies | 15 |
| | Industrial Arts | 21 |
| | Science Technologies | 41 |
| | Precision Production | 48 |
| | Architecture and Environmental Design | 04 |
| | Law | 22 |
| | Library and Archival Sciences | 25 |
| | Theology | 39 |
| | Consumer, Personal and Misc. Services | 12 |
| | Military Sciences | 28 |
| | Military Technologies | 29 |
| | Basic Skills | 32 |
| | Citizenship/ Civic Activities | 33 |
| | Health Related Activities | 34 |
| | Interpersonal Skills | 35 |
| | Leisure and Recreational Activities | 36 |
| | Personal Awareness | 37 |

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